

U.S. Patent Application No. 10/730,870
Amendment and Reply dated July 3, 2007
In Response to Office Action dated April 3, 2007

AMENDMENTS TO THE SPECIFICATION:

At pages 21-22 of the Specification, please delete paragraph [00066] and replace it with the following amended paragraph:

[00066] With reference to the drawings, Fig. 1a is a top plan view of a microfluidic device 300 according to various embodiments. Region 304 of the microfluidic device 300 includes a plurality of fluid-processing pathways 305 that are generally radially arranged and can be parallel or non-parallel to a radius of the microfluidic device 300. Each fluid-processing pathway can include a plurality of features, for example, a loading chamber 301, a reaction chamber 303, a purification chamber 307, and a separation chamber 309, as shown. Fluid processing pathway 305 includes a pathway end 299 comprising a loading chamber 301. The separation chamber 309, can be, for example, a marking chamber. An enlarged view of section 1b of the microfluidic device, including separation chamber 309, is shown in Fig. 1b.

At pages 23-24 of the Specification, please delete paragraph [00072] and replace it with the following amended paragraph:

[00072] According to various embodiments, pressure created by the movement of the second material and the first material can be vented to the atmosphere through vent first input opening 334, and negative pressure within the separation chamber 309 can be relieved through vent first input opening 334. The denser first material can be separated from its carrier by using, for example, centripetal force. For example, microfluidic device 300 can be spun around axis 302 at from about 1,500 RPM to about 8,000 RPM, or from about 2,500 RPM to about 5,000

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RPM, during which spinning the denser first material can be separated from a less-dense second material and deposited against sidewall 322. The second material, separated from the denser first material, can then be removed from the material containment region 320 through output opening 330; without removing the denser first material deposited on the sidewall 322.